(5) Be suspended from the inside canopy, so they are immediately visible by survivors on entering the inflatable liferaft. They may be contained in the same envelope with the instructions on how to survive if the instructions for immediate action are visible through both faces of the envelope.

(x) *Thermal protective aid (Regulation III/38.5.1.24).* Each thermal protective aid described by Regulation III/38.5.1.24 must be approved by the Commandant under approval series 160.174.

(y) *Repair outfit (Regulation III/39.10.1.1).* The repair outfit required by Regulation III/39.10.1.1 must include—

(1) Six or more sealing clamps or serrated conical plugs, or a combination of the two;

(2) Five or more tube patches at least 50 mm (2 in) in diameter;

(3) A roughing tool, if necessary to apply the patches; and

(4) If the patches are not self-adhesive, a container of cement compatible with the liferaft fabric and the patches, marked with instructions for use and an expiration date.

(z) *Pump or bellows (Regulation III/39.10.1.2).* The pump or bellows required by Regulation III/39.10.1.2 must be manually operable and arranged to be capable of inflating any part of the inflatable structure of the liferaft.

(aa) *Plugs for pressure-relief valves.* Plugs for rendering pressure-relief valves inoperable must be provided in any liferaft fitted with such valves, unless the valves are of a type that can be rendered inoperable without separate plugs. If provided, plugs for pressure-relief valves must be usable with hands gloved in an immersion suit, and must either float or be secured to the liferaft by a lanyard.

[CGD 85–205, 62 FR 25547, May 9, 1997, as amended by USCG–1998–4442, 63 FR 52192, Sept. 30, 1998; USCG–2000–7790, 65 FR 58464, Sept. 29, 2000]

§ 160.151–25 Additional equipment for inflatable liferafts.

The manufacturer may specify additional equipment to be carried in inflatable liferafts if the equipment is identified in the manufacturer's approved drawings and if the packing and inspection of the equipment is covered in the servicing manual. Any such additional equipment for which performance or approval standards are prescribed in this part or in 47 CFR part 80 must comply with those standards.

§ 160.151–27 Approval inspections and tests for inflatable liferafts.

(a) Except as provided in paragraph (b) of this section, to satisfy the testing requirements of: IMO Resolution A.689(17), part 1, paragraphs 5.1 through 5.15 inclusive; paragraph 5.16 for a davit-launched inflatable liferaft; and paragraph 5.17, a prototype inflatable liferaft of each design submitted for Coast Guard approval must meet the additional specific requirements and tests specified in paragraphs (c) and (d) of this section.

(b) The Commandant may waive certain tests for a liferaft identical in construction to a liferaft that has successfully completed the tests, if the liferafts differ only in size and are of essentially the same design.

(c) Tests must be conducted in accordance with the indicated paragraphs of IMO Resolution A.689(17), except:

(1) *Jump test (Paragraph 1/5.2).* One-half of the jumps must be with the canopy erect, and the remainder with the canopy furled or deflated. If a ''suitable and equivalent mass'' is used, it must be equipped with the shoes described in paragraph 1/5.2.1 of Resolution A.689(17), and arranged so the shoes strike the liferaft first.

(2) *Mooring-out test (Paragraph 1/5.5).* Initial inflation may be with compressed air.

(3) *Loading and seating test (Paragraph 1/5.7).* For a liferaft not intended for use with a launching or embarkation appliance, the persons used to determine seating capacity shall wear insulated buoyant immersion suits rather than lifejackets.

(4) *Boarding test (Paragraph 1/5.8).* This test must be performed using each boarding ramp or boarding ladder which is installed on the liferaft.

(5) *Canopy-closure test (Paragraph 1/5.12).* This test is required only for SOLAS A and SOLAS B inflatable liferafts. For a davit-launched liferaft, any opening near the lifting eye should be sealed during the test to prevent the ingress of water. The water accumulated within the liferaft at the end of

the test must not exceed 4 liters (1 gallon).

(6) *Detailed inspection (Paragraph 1/5.14).* The independent laboratory's inspection of the prototype liferaft under §160.151–13(a) satisfies the requirements of paragraph 1/5.14.

(7) *Davit-launched liferafts—strength test (Paragraph 1/5.16.1).* The calculation of combined strength of the lifting components must be based on the lesser of—

(i) The lowest breaking strength obtained for each item; or

(ii) The component manufacturer's ultimate strength rating.

(d) The boarding ramp on each liferaft equipped with one must be demonstrated capable of supporting one person weighing 100 kg (220 lb), sitting or kneeling and not holding onto any other part of the liferaft.

§160.151–29 Additional approval tests for SOLAS A and SOLAS B inflatable liferafts.

To verify compliance with the requirements of Regulation III/39.5.1, the following test must be conducted for SOLAS A and SOLAS B inflatable liferafts in addition to those required by §160.151–27 and IMO Resolution A.689(17):

(a) *Test of filling time for stability appendages.* A representative sample of each type and size of stability appendage to be fitted to a liferaft must be tested as follows:

(1) The appendage must be attached to a testing jig similar in material and construction to the appendage's intended location on a liferaft. The method of attachment must be the same as used on a liferaft. The appendage and jig must be attached to a scale capable of recording peak readings, and suspended over a pool of calm water. The dry weight must be recorded.

(2) The appendage and jig must then be quickly lowered into the water until the appendage is completely submerged. When the appendage has been in the water for 25 seconds, it must be smoothly lifted completely out of the water, and the peak weight after the appendage is removed from the water recorded.

(3) The difference in weights measured according to paragraphs (a) (1) and (2) of this section must be at least 60 percent of the appendage's volume, calculated in accordance with §160.151–17(a)(2)(i).

(b) [Reserved]

[CGD 85–205, 62 FR 25547, May 9, 1997, as amended by USCG–1998–4442, 63 FR 52192, Sept. 30, 1998]

§160.151–31 Production inspections and tests of inflatable liferafts.

(a) Production inspections and tests of inflatable liferafts must be carried out in accordance with the procedures for independent laboratory inspection in part 159, subpart 159.007, of this chapter and with those of this section.

(b) Each liferaft approved by the Coast Guard must be identified with unique lot and serial numbers as follows:

(1) Each lot must consist of not more than 50 liferafts of the same design and carrying capacity.

(2) A new lot must begin whenever the liferafts undergo changes of design, material, production method, or source of supply for any essential component.

(3) The manufacturer may use a running-lot system, whereby the fabrication of the individual liferafts of a lot occurs over an extended interval under an irregular schedule. Each running lot must comprise not more than 10 liferafts of the same design and carrying capacity. Each running-lot system must be in accordance with a procedure proposed by the manufacturer and approved by the Commandant.

(4) Unless a lot is a running lot, each lot must consist of liferafts produced under a process of continuous production.

(c) Among the records required to be retained by the manufacturer under §159.007–13 of this chapter, are affidavits or invoices from the suppliers identifying all essential materials used in the production of approved liferafts, together with the lot numbers of the liferafts constructed with those materials.

(d) Each approved liferaft must pass each of the inspections and tests described in IMO Resolution A.689(17), part 2, paragraphs 5.1.3 through 5.1.6 inclusive, and prescribed by paragraphs (e) through (g) of this section. For a davit-launched liferaft, these tests